Primary Barriers to Working Class Representation

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Abstract

Why are working class Americans underrepresented in elected office relative to their share of the population? Worker candidates rarely emerge, but existing evidence suggests workers perform just as well as white-collar candidates once they appear on the ballot. However, researchers have not yet investigated worker performance in primary elections, where candidates compete without the political or financial backing of a party. We analyze novel data describing the occupational background of all candidates who competed in U.S. House primaries between 2008 and 2016. The results show that working class candidates receive an average vote share 23 percentage points lower than white-collar candidates, or eight points lower with controls. We find no clear evidence that partisan differences, prior experience, or primary type contribute to this gap, but suggestive evidence that fundraising differences play a role. The study suggests primary elections contribute to keeping workers out of office in the United States.

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Why are working class Americans underrepresented in elected office relative to their share of the population? Workers tend not to run for office, in part because they lack the time and money to campaign and because local political leaders rarely recruit them to run (Carnes, 2018). However, there is little evidence to suggest voters prefer white-collar candidates over workers. Results from survey experiments show that voters are just as willing to support workers as white-collar candidates at the ballot box (Carnes and Lupu, 2016a; Sadin, 2016). Observational studies of election outcomes tell a similar story. Working class candidates do not receive fewer votes in general elections for the U.S. House than white-collar candidates (Carnes, 2018). Evidence outside the U.S. is more mixed, but finds either substantively small or no class differences in candidate performance (Albaugh, 2020; Matthews and Kerevel, 2021).

However, the field possesses evidence from a narrow range of elections. In particular, existing evidence tracks how workers perform when candidates compete with party nominations in general elections. Party nominations benefit candidates by reducing the number of opponents in the field, uniting a diverse coalition of voters, and mobilizing the resources of donors and activists on their behalf (Aldrich, 2011). As a result, workers nominated by a political party can compete on a more level playing field against white-collar opponents nominated by rival parties. We do not know how workers might perform in contests in which no candidates hold party nominations, such as nonpartisan elections or primaries. We focus on primary elections and argue that they function as an effective barrier to working class candidates reaching office. Workers disproportionately lack access to the resources—namely campaign funding and the support of party leaders (Carnes, 2018)—that are important for winning primaries (Bonica, 2017, 2020; Hassell, 2016; Masket, 2009).

Building on data from Porter and Treul (2019), we record the occupational background of all U.S. House primary candidates between 2008 and 2016. We compare the vote shares and win rates of working class and white-collar candidates. Our analysis shows

that working class candidates receive a vote share 23 points lower than nonworkers on average, and eight percentage points lower than nonworkers once we control for potential confounding factors. We find some evidence that workers are less likely to win their contests as a result, though we can only reject the null at the .10 instead of the .05 level of confidence. Across a range of scenarios, we estimate that workers are seven to 12 percentage points less likely to win than their white-collar rivals. Workers appear to perform similarly in Democratic and Republican primaries.

We caution that the findings are descriptive; unobserved confounders could explain differences in performance between workers and nonworkers. Furthermore, we do not identify an exact mechanism explaining the observed disparity in election outcomes. We cannot claim based on the evidence that voter prejudice against workers is responsible for their underperformance. In fact, given previous survey experimental findings (Carnes and Lupu, 2016a; Sadin, 2016), it seems more likely that factors structuring primary voters' choices, like elite cues and campaign spending, harm workers' chances in primaries more than class prejudice among voters. We provide some suggestive evidence that differences in fundraising ability play a key role in workers' weaker performance. Finally, we investigate whether prior experience in elected office or primary type moderates the association between a working class background and electoral performance. Though a small number of observations makes us hesitant to draw firm conclusions in both cases, we find no clear evidence that either factor moderates the relationship.

Overall, the findings suggest that primary elections hurt workers' chances of reaching public office. While prior evidence suggests small or null differences workers and white-collar candidates' performance in elections (Carnes, 2018; Albaugh, 2020; Matthews and Kerevel, 2021), we suspect that the distinct structures of primary and general elections explain our divergent findings. Because primaries are often the point of entry for office-seekers, worker underperformance there could have downstream consequences for working class representation. Workers would be unable to compete in the general election with the

political and financial backing of a party and demonstrate their viability to local party leaders and donors skeptical of backing workers. They would also be less likely to win office and gain experience vital to running successfully for higher office. Researchers should further explore why workers fare poorly in primaries and whether these findings generalize to primary and nonpartisan elections at the state and local level, where politicians often start their careers.

Explaining the Underrepresentation of the Working Class

Despite forming a majority of the population, working class Americans make up only a small percent of elected representatives in the United States. According to the most recently available data, Americans holding manual labor, service industry, or clerical jobs constitute 52% of the adult population, but hold just 10% of city council seats, 3% of state legislative seats, and 2% of congressional seats (Carnes, 2018). The near absence of the working class in American lawmaking bodies has important consequences for economic policymaking. Working class members of Congress have tended to vote more liberally on economic matters, while state legislatures with more working class members tend to pass more redistributive economic policies (Carnes, 2013). Working class underrepresentation may hold important consequences for how citizens accept the legitimacy of governing institutions and their trust in those institutions. Though comparable data has not been gathered for the U.S., a study of Latin American countries found that citizens were less likely to trust government in countries where the national legislature had fewer working class members (Barnes and Saxton, 2019).

The leading explanation for workers' underrepresentation is that they rarely emerge to run for office. Carnes (2018) finds that workers are disproportionately burdened by the financial and time demands of campaigning. Moreover, candidate recruiters like local party officers and civic leaders—often from white-collar backgrounds themselves—rarely recruit workers. Instead, they turn to their pre-existing social networks to find potential

candidates. Because working class candidates are often absent from these networks, they tend not to be asked to run. Fundraising also plays a role. Access to money early in a campaign gives upstart candidates a leg up in primary contests—an advantage for professionals like lawyers, whose social and professional networks are typically well-resourced and likely to donate (Bonica, 2017, 2020). Finally, certain offices provide greater institutional incentives for candidates from white-collar backgrounds to run. For example, Carnes and Hansen (2016) show that state legislatures that pay members higher salaries tend to attract more professionals to run for seats, presumably because the opportunity cost of giving up a high-paying job to serve in public office is consequently lower (see also Besley and Coate, 1997; Besley, 2004).

However, workers do not decline to run because they *are* less qualified or *feel* less qualified to hold elected office than Americans with white-collar backgrounds (Carnes, 2018). Politicians from the working class are likely no less intellectually capable than their white-collar peers (Dal Bó et al., 2017) and politicians holding college degrees seem to perform no better in office than those without (Carnes and Lupu 2016b, though see Besley, Montalvo, and Reynal-Querol 2011). Nor do working class Americans count themselves out. In national surveys, American workers self-report equal ambition to hold office and equal confidence in their own campaign-relevant skills (e.g. public speaking, interpersonal skills) as white-collar Americans on average (Carnes, 2018).

Voters are likely not responsible for the lack of workers either. Survey experimental evidence has shown that respondents are no less likely to vote for a factory worker than for a business owner (Carnes and Lupu, 2016a) or for an ambulance driver over a cardiologist (Sadin, 2016). Evidence from related research measuring candidate social class on the basis of wealth or family background, rather than current occupation, is consistent with these findings. A range of studies show null or even positive effects of a working class background on voter approval in the U.S. and other democracies (Kevins, 2019; Sadin, 2016; Hoyt and DeShields, 2021; Chauchard, Klanja, and Harish, 2019; Campbell and

Cowley, 2014; Vivyan et al., 2020; Griffin, Newman, and Buhr, 2020; Carnes and Sadin, 2015).

In the few observational studies of election outcomes, researchers have not found workers to be at much of a disadvantage. Carnes (2018) finds no difference in the performance of workers and white-collar candidates in general elections for the U.S. House. Outside the U.S., studies find substantively small or null differences. Matthews and Kerevel (2021) estimate that workers in German state legislative elections are three percentage points less likely to win their contests compared to their white-collar rivals (11% vs. 14% respectively). Albaugh (2020) finds no appreciable difference in the performance of working class and white-collar candidates in elections to the provincial legislature in New Brunswick, Canada. To our knowledge, no other studies compare the performance of white-collar and working class candidates using observational data.

Though results from election studies are generally consistent with the idea that voters do not pose a barrier to workers (though see Matthews and Kerevel, 2021), the body of evidence is small. Researchers have yet to study election outcomes for workers running for different types of offices (especially non-legislative offices), under a wide variety of electoral rules, and, importantly, in contests without partisan nominations. Party nominations help to bring order to election contests by limiting the number of candidates competing and by concentrating campaign resources and voter support behind those candidates (Aldrich, 2011). For candidates without the personal resources and broad popular appeal needed to win an election on their own, parties are essential to winning. Compared to elections in which candidates are not distinguished by differing party labels—such as in primaries and nonpartisan elections in the U.S.—partisan elections feature party support that can help level the playing field between candidates with disparate personal resources.[1] The leveling function of parties in general elections—especially in an era of

[1]Former Chicago mayor Richard J. Daley, a son of Irish immigrants who began his career as a clerical worker and ended atop the city's infamous political machine, offered this same assessment to a reporter: "The party permits ordinary people to get ahead. Without the party, I couldn't be mayor. The rich guys can get elected on their money, but somebody like me, an ordinary person, needs the party. Without the

intense partisanship in the U.S.—might help to explain prior results finding no or small differences between workers' and white-collar candidates' performance. When parties nominate workers, those candidates should enjoy all the same benefits of nomination that any white-collar candidate would enjoy.

Potential Challenges for Workers in Primary Elections

When competing for a party's nomination in a primary election, workers potentially face deficits in elite support, campaign funds, or voter support. Each is a crucial ingredient in winning a primary contest. Support from party leaders helps to secure a party's nomination, even as voters ultimately choose primary winners. In one view, parties function as a network of officeholders, activists, and policy demanders who coordinate to win power and achieve desired policy outcomes (Bawn et al., 2012; Koger, Masket, and Noel, 2010). These leaders have incentives to coordinate to nominate candidates who can win a general election and contribute to a governing majority that can deliver policy victories. While no one actor or group of actors can determine the outcome of a nomination process in the modern primary system, leaders and activists help shape the outcome through selective candidate recruitment, targeting resources to favored candidates, and clearing the field of competitors (Cohen et al., 2008; Hassell, 2016; Masket, 2009).

However, the party leaders whose support candidates need to succeed in primary contests often regard working class candidates with skepticism. Using both descriptive and experimental evidence from a survey of county party chairs, Carnes (2018) finds that party leaders believe workers are less capable of raising enough money and winning their contests. A survey of state legislative candidates in the same study also showed workers were less likely than their white-collar counterparts to report being recruited to run by local officeholders, community leaders, and interest groups. With a disproportionate lack of support, workers are less likely to accrue the funding, elite endorsements, media expo-

party, only the rich would be elected to office." (Royko, 1971, p. 78).

sure, and professional campaign staff support that can help them win (e.g. Dominguez, 2011; Hassell, 2016; Desmarais, Raja, and Kowal, 2015).

Arguably the most vital of these resources is money (Bonica, 2017). Without the backing of party elites, workers may have trouble raising money outside the group of donors, activists, and elected officials who provide the core of funding to primary candidates. Workers will have fewer personal resources to draw from to run their campaigns, and contacts in their personal and professional networks are also likely to have less disposable income that can be donated toward their candidacy. Candidates who lack early funding from these networks are less likely to succeed in their campaigns (Bonica, 2020). Problems could compound if resource constraints or lack of elite support lead voters to see otherwise acceptable candidates as nonviable and turn their attention to rival candidates (Utych and Kam, 2014).

A final, if less likely, reason to suspect workers to perform worse in primaries is voter bias. As it stands, we simply do not know whether primary voters exhibit bias against working class candidates. On one hand, there is little existing evidence that the general public favors white-collar candidates over workers (Carnes and Lupu, 2016a; Sadin, 2016). On the other hand, it is unclear if existing findings apply to primary electorates since samples studied in these experiments are intended to represent the adult population. Primary electorates are not representative; elections are marked perennially by low voter turnout (Ranney, 1972; Jewitt and Treul, 2014), and those who do vote are generally more partisan, more ideologically extreme, and more tuned into politics than the average citizen (Norrander, 2015; Jacobson, 2012; Sides et al., 2020). Drawing inferences about the preferences of primary voters from population-based survey experiments would be problematic if the types of people who select into primary electorates have systematically different views of working class candidates than the population at large. Given what we know about party leaders' attitudes towards working class candidates (Carnes, 2018) and assuming that politically attentive primary voters share some attitudes with party

leaders, it is at least plausible that primary electorates have systematically different views than the general public.

Moreover, because primary candidates have not yet won a party nomination, primary voters cannot use party label as a cue as they would in a general election. Party labels help voters make inferences about and choose between candidates (Lupia and McCubbins, 1998). Without party labels, voters turn to other cues to decide their preferred candidate (Popkin, 1991; Schaffner, Streb, and Wright, 2001). It is difficult to predict which cues voters will turn to in the absence of party labels. Occupational background can serve as such a cue, and at least some voters use it to judge candidates' competence and qualifications for office. Kirkland and Coppock (2018) show that candidates' work experiences help voters discriminate between candidates in both competence judgments and vote choice in nonpartisan mayoral elections.[2] Results elsewhere also show that voters see working class candidates as less competent than white-collar candidates (Sadin, 2016; Kirkland, 2021). Yet, Carnes and Lupu (2016a) show that voters see workers to be as qualified for office as white-collar candidates, more understanding of the problems voters face, and further to the ideological left. While partisanship likely overrides these competing considerations in general elections, it is unclear how the range of stereotypes voters hold about workers—incompetence, relatability, liberalism—might guide voters' choices in primary elections. Therefore it is conceivable that the attitudes of primary voters could hurt workers' chances of winning, though the voter bias explanation is perhaps less viable than alternative ones given existing evidence.

To summarize, workers face an uphill battle to win a party nomination. For a variety of reasons—a lack of elite support, fundraising challenges, and possibly even prejudice from primary voters—we expect to see workers underperform their white-collar rivals. Researchers have not yet investigated working class performance in primaries. It is important to study them because, with few exceptions, candidates do not compete in or win

[2]Primaries are contests between partisans, but they are similar to nonpartisan elections in that voters cannot use party labels to distinguish between candidates.

general elections without winning primaries first. If working class candidates fared poorly in primaries, they would be unable to progress to general elections where evidence shows they can compete on an even playing field with white-collar candidates (Carnes, 2018). We expect to observe the following:

H1: Working class candidates will receive a lower vote share than white-collar candidates in primary elections.

H2: Working class candidates will be less likely to win their contests than white-collar candidates.

Data

We turn to data from primary elections for seats in the U.S. House of Representatives. We build upon data collected by Porter and Treul (2019), who recorded the prior officeholding experience and performance of all Congressional primary candidates dating back to 1980. However, their original data were not fine-grained enough to distinguish working class candidates from others. We directed a team of research assistants to use web searches to identify the candidates' prior occupations throughout their lifetimes. Research assistants gathered information from candidate websites, local news sources, and the candidates' public-facing social media profiles on sites like Facebook and LinkedIn. Due to the large number of primary candidates running each year, we limited the data to House candidates who ran between 2008 and 2016.

Once candidates' work histories were collected, we followed Carnes' (2013) coding scheme to identify workers making one slight departure. Whereas Carnes (2013) measured the proportion of an officeholder's career spent in working class jobs in its preferred coding scheme, we use a binary measure and only count candidates as workers if they held a

working class job at the time they ran for office.[3] We think the potential culprits for worker underperformance—fundraising challenges or skepticism from elites and voters—pose greater challenges to current workers than former workers. For example, a candidate who worked as a server early in adulthood but later went to law school is likely to have greater networking and fundraising advantages compared to a candidate who remained in the service industry through their career. Likewise, voters who are skeptical of the qualifications of a working class candidate could find a candidate who used to tend bar but now manages a large company to be less objectionable. Former workers may even hold an advantage over lifelong white-collar candidates; they can present a personal narrative of "working their way up," appealing to a widely resonant American cultural narrative of upward mobility through individual effort. Relevantly, voters are more likely to support candidates who came from humble childhood circumstances (Carnes and Sadin, 2015; Kevins, 2019). Below, we explicitly compare the performance of current and former workers through a statistical test and show that former workers perform more similarly to nonworkers than current workers in primaries. We present a list of jobs held by current workers in our data in Table A1 of the Supporting Information (SI).

Using our definition, we identified 78 current workers who ran in House primaries between 2008 and 2016, out of 7,869 total candidates. This equates to 0.99% of candidates, a somewhat low estimate compared to research on the composition of American legislatures (Carnes, 2013; Hansen and Clark, 2020). We should expect our estimate to be lower since we restrict our definition to current workers.[4] If our count is off, it is almost certainly in the direction of an undercount. We only recorded candidates as workers if we could positively identify their backgrounds. Candidates for whom no information could be located were coded as nonworkers. This strategy sets up a hard test of our ex-

[3]Carnes (2013) also analyzes historical data from the *Roster of Congressional Officeholders* (ICPSR and McKibbin, 1997) which records members' last occupation before Congressional service, an approach that is similar to ours.

[4]If we expand the definition to include any candidate who spent part of their careers as workers, we identified 489 working class candidates, equivalent to 6.2% of all candidates.

Table 1: Mean Vote Share by Candidate Experience

Group	**N**	**Mean Vote Share**
Workers	78	0.26
Nonworkers	7,791	0.49

Notes: Data from Porter and Treul (2019) and the authors. Vote shares are missing for nine candidates.

pectations. An overly conservative count would likely bias our results away from finding any differences between workers and nonworkers, since missed workers would be counted among nonworkers. Though this study focuses on how workers perform conditional upon having entered a primary race, our count provides additional evidence that working class candidates rarely emerge in the first place.

To determine how worker status affects candidate performance, we gathered data on two related outcome variables: *Vote Share*, or the percent of the primary contest vote won by the candidate; and *Win*, a dichotomous variable recording whether the candidate won her primary contest. As an initial test of working class candidates' performance, we present the mean vote share for workers and nonworkers in Table 1. While workers received an average vote share of 26%, nonworkers received an average share of 49%, a statistically significant difference ($p < 0.05$) of 23 percentage points.

However, these raw vote shares may not reveal much about primary voter support for workers if the relationship is confounded by other factors. Structural characteristics of the races in which workers compete, other characteristics of the candidates, or the places in which candidates run could help explain candidate vote shares. To eliminate these rival explanations, we estimate a series of multiple regression models. We control for contest-level, candidate-level, and district-level variables.

We begin with contest-level variables. We control for the *Number of Candidates* in a race, since a higher number of competitors should disperse votes more widely and lead to lower overall vote shares for any one candidate. Given that candidates with prior electoral experience tend to receive higher vote shares (Jacobson, 1989), we include the count of

Quality Opponents that a candidate faces in the contest. We also control for whether a primary is being held for an *Open Seat* using a binary indicator, since those contests tend to draw more candidates and more quality competition (Jacobson and Kernell, 1983; Maestas and Rugeley, 2008; Maisel et al., 1994).

Turning to candidate-level variables we record whether the candidate is an *Incumbent* with a binary indicator, since incumbents have a high likelihood of winning their party's nomination (Cox and Katz, 1996; Carson, Engstrom, and Roberts, 2007). We also record a binary indicator for *Quality Non-Incumbents*, since prior officeholders tend to outperform amateur candidates regardless of incumbency (Jacobson, 1989). We control for *Primary Funds*, the total dollars spent on a candidate's bid from both campaign funds and outside spending, under the presumption that better-funded candidates will receive greater electoral support (Abramowitz, 1991; Box-Steffensmeier, 1996; Bonica, 2017). We include binary indicators of candidates' party affiliations. Candidates are recorded as *Republican* or *Third Party*, with Democrats excluded as the reference group.

Finally, we control for three district-level variables. Two are socioeconomic characteristics of the districts that candidates run in: *District Median Income* and *District College-Educated*, the latter measured as a percentage of district residents with four-year degrees. Given the historical affiliation of labor unions and working class voters with the Democratic Party, we expect workers may perform better in the primaries in more heavily Democratic districts. We control for *Democratic Vote Share*, measured as the vote share received by that party's presidential candidate in the concurrent or most recent presidential election.

Results

Our data are observed at the candidate level. Election outcomes for one candidate depend on the performance of other candidates against which they are competing in a primary. Therefore, we estimate our models using multilevel regression, with candidates nested

in contests.[5] We report robust clustered standard errors. Evidence in support of the first hypothesis would come in the form of a negatively signed and statistically significant coefficient estimate for the *Worker* variable.

Our first model tests how the vote shares for workers compare to nonworkers with contest random effects but no other controls. Results are presented in Table 2. The finding approximates that from Table 1, showing that workers on average receive a vote share 21 points lower than nonworkers.

The second model adds contest-level and candidate-level controls. Once these factors are included, the gap between workers' vote shares and the vote shares of other candidate types decreases. However, the difference remains large and statistically significant. Workers are estimated to receive a vote share eight points lower on average than nonworkers. Among the controls, incumbent status, greater primary spending, and competing for an open seat are positively and significantly associated with higher vote share. A greater number of candidates and a greater number of quality opponents is associated with decreased vote share. Republicans and third party candidates tend to receive lower vote shares than Democratic primary candidates, though the substantive difference between Republicans and Democrats is very small.

The third model includes the same set of variables as the second model, but adds in district-level variables. None of the district-level characteristics are found to be significantly associated with candidate vote share. Estimates for the independent variables of interest and the previously included controls remain largely unchanged between the second and third models. In all models, we find evidence in support of the first hypothesis.

A lower overall vote share for workers in primaries is a notable outcome in itself, but it could be the case that these lower vote shares are not large enough to prevent workers from winning. Therefore, we conduct a second test examining which candidates

[5]An alternative strategy to model primary vote shares would be to normalize candidates' expected vote shares around the number of competitors in a contest, then use OLS regression with year fixed effects to calculate estimates (see Bonica, 2020). We estimate our model using this strategy and present results in Table A2 of the SI. Results yield similar conclusions to those in Table 2.

Table 2: Occupational Background and Vote Share in House Primary Elections

	(1)	(2)	(3)
Worker	-0.21*	-0.08*	-0.08*
	(0.02)	(0.02)	(0.02)
Number of Candidates		-0.10*	-0.10*
		(0.00)	(0.01)
Quality Opponents		-0.08*	-0.07*
		(0.01)	(0.01)
Open Seat		0.10*	0.09*
		(0.01)	(0.01)
Quality Non-Incumbent		0.13*	0.13*
		(0.01)	(0.01)
Incumbent		0.42*	0.41*
		(0.01)	(0.01)
Primary Funds		0.11*	0.11*
		(0.02)	(0.02)
Republican		-0.01*	-0.01*
		(0.01)	(0.01)
Third Party		-0.10*	-0.10*
		(0.01)	(0.01)
District Median Income			-0.07
			(0.04)
District College-Educated			0.17
			(0.10)
Democratic Vote Share			-0.03
			(0.02)
Contest RE	Yes	Yes	Yes
Constant	0.65*	0.75*	0.79*
	(0.01)	(0.01)	(0.02)
N	7869	7571	7028
BIC	4712.39	-2714.20	-2288.13

Notes: Data from Porter and Treul (2019) and the authors. Estimates obtained using multilevel regression. Standard errors clustered by contest. *p<0.05. Significance tests are two-tailed.

ultimately won their primary contests. In this case, we use multilevel logistic regression to predict the binary variable *Win*, with candidates nested in contests. We again calculate robust clustered standard errors. As with the first hypothesis, evidence in support of

Table 3: Occupational Background and Likelihood of Winning House Primary Elections

	(1)	(2)	(3)
Worker	-1.38*	-0.55	-0.52
	(0.29)	(0.29)	(0.30)
Number of Candidates		-0.40*	-0.43*
		(0.03)	(0.03)
Quality Opponents		-0.70*	-0.68*
		(0.06)	(0.06)
Open Seat		0.23*	0.17*
		(0.07)	(0.07)
Quality Non-Incumbent		1.40*	1.37*
		(0.13)	(0.13)
Incumbent		5.04*	4.86*
		(0.21)	(0.21)
Primary Funds		1.38*	1.41*
		(0.24)	(0.26)
Republican		-0.14*	-0.14*
		(0.05)	(0.05)
Third Party		-0.79*	-2.76*
		(0.35)	(0.99)
District Median Income			0.58*
			(0.27)
District College-Educated			-0.54
			(0.72)
Democratic Vote Share			0.37*
			(0.17)
Contest RE	Yes	Yes	Yes
Constant	0.22*	0.89*	0.60*
N	7869	7571	7028
BIC	10838.37	6063.37	5767.65

Notes: Data from Porter and Treul (2019) and the authors. Estimates obtained using multilevel logistic regression. Standard errors clustered by district-year. *p<0.05. Significance tests are two-tailed.

the second would come in the form of a negatively signed and statistically significant coefficient estimate for the *Worker* variable.

Table 3 presents the findings. In the first model with contest random effects but no controls, the coefficient estimate for the *Worker* variable is negatively signed and statisti-

cally significant. In the subsequent models with controls, we see that the variable is still negatively signed but that the estimate falls below the conventional .05 level of confidence (though it remains significant at the .10 level of confidence). Therefore, we find mixed evidence in support of the second hypothesis. Coefficient estimates among the control variables largely reflect the results from Table 2 in terms of sign and significance with two notable exceptions. We find that a higher district median income and a higher vote share for the Democratic presidential candidate are associated with a higher likelihood of a candidate winning.

Because coefficient estimates from logistic regression models are difficult to interpret on their own, we calculate predicted probabilities of different candidate types winning their contests. We focus on the probabilities generated from the fully specified third model in Table 3, which includes full controls and has the best model fit. Following recommendations from Hanmer and Kalkan (2013), we calculate the probability of worker candidate victory under a number of plausible election scenarios. The baseline model represents a non-quality Democratic candidate with one quality challenger competing for an open seat, with all other controls held at their means. We alter the value of control variables one at a time, with the remaining variables in the model held at their baseline values.

We present the results in Table 4. In all scenarios, nonworkers have a higher probability of victory than worker candidates. The difference in probabilities varies across scenarios, but ranges between seven and 12 percentage points. The largest factors shaping chances of winning come from the number of quality opponents in the race and whether the candidate herself has held elected office before. Out of all scenarios, workers are most likely to win when they have held elected office before (0.53). However, they still face a lower likelihood of winning than a quality nonworker candidate (0.65). Partisanship seems to make little difference, whether in terms of the partisan lean of the district or the party primary in which candidates compete.

Table 4: Predicted Probability of Primary Win by Candidate Type

Model	Worker	Non-Worker
Baseline	0.22	0.32
No Quality Opponents	0.36	0.48
Two Quality Opponents	0.12	0.19
Quality Candidate	0.53	0.65
Safe Republican District	0.21	0.31
Competitive District	0.22	0.32
Safe Democratic District	0.23	0.34
Republican Candidate	0.20	0.29

Notes: Data from Porter and Treul (2019) and the authors. Predicted probabilities of candidate victory based on model 3 of Table 3. Baseline model represents a non-quality Democratic candidate with one quality challenger competing for an open seat, with all other controls held at their means. All subsequent models represent changes relative to the baseline model. For example, in the Safe Republican District model, all parameters are equal to the baseline except that Democratic vote share in the general is set to 0.30.

The results hinge on our restriction of the definition of workers to those candidates whose last (current) job before (while) running for office was in the working class, rather than any candidate who had held a working class job in their adult life. In Tables A3 and A4 of the SI, we present evidence that former workers perform more similarly to nonworkers than current workers in their contests. In Table A2, we show that former workers receive a mean vote share of 59%, about 33 points higher than current workers at 26%. In Table A3, we replicate the main results in Tables 2 and 3 and distinguish former workers from nonworkers. Our results show that, relative to nonworkers, former workers receive a small penalty in vote share—roughly two percentage points in the fully specified model compared to eight for current workers. The small penalty does not translate into a significantly lower chance of winning a primary for former workers compared to nonworkers, even as we find that current workers are less likely to win their contests.

Partisan Differences

While the models above control for the party affiliation of candidates, they do not show whether workers perform better in one party's primary or another. It could be the case that workers face no penalty in Democratic primaries but face a large penalty in Republican primaries or vice versa. During the period of study (2008-16) workers did not fall cleanly into either party's coalition of support. Organized labor has historically allied with the Democratic Party, but union influence has declined for decades and neoliberal economic views have gained traction among Democratic elites (Baer, 2000; Bucci and Reuning, 2020). These trends raise significant questions of whether we should expect workers to perform better in Democratic primaries than Republican primaries. Yet, given the Republican Party's conservative economic policies and historical hostility to organized labor, it does not seem that workers would perform any better in their primaries.[6]

We test whether party affiliation moderates the relationship between occupational background and primary performance. We reestimate the models in Tables 2 and 3 by excluding third party candidates and interacting the *Republican* indicator with the indicator for *Workers*. Table A5 in the SI displays the results. We continue to find that workers face a roughly eight point penalty in vote share in both Republican and Democratic primaries. We cannot reject the null hypothesis that workers are no more likely to win a Democratic versus Republican nomination. Therefore, we find no evidence of a difference in worker performance across parties.

Ideology and Fundraising

More ideologically extreme candidates are likely to suffer from reduced electoral support (e.g. Hall, 2015). However, we omitted a measure of candidate ideology from the models

[6]Journalists have frequently written about Donald Trump's appeal to the "white working class" since 2016, suggesting that some workers might increasingly find a home in the Republican Party. However, there are good reasons to be skeptical that the working class label accurately describes his base of support (Carnes and Lupu, 2021; Ogorzalek, Piston, and Puig, 2020). In any case, our data mostly predates Trump's ascendance to the White House.

above. CFscores, calculated from campaign contribution data, can be used to measure ideology for candidates without voting records (Bonica, 2014). However, CFscores are not calculated for candidates who received contributions from fewer than 25 unique donors. In our data, scores are missing for 25% of all candidates in our data, including roughly 24% of nonworkers and 61% of workers.

Focusing narrowly on the candidate ideology as a potential confounder, multiple imputation serves as a useful strategy to recover estimates of the impact of ideological extremity. In the first model of Table A6 in the SI, we show that ideological extremity is negatively and significantly associated with candidate vote share. However, estimates of the vote share deficit between workers and nonworkers remain comparable to earlier estimates, with workers receiving roughly eight points less of the vote on average. Therefore, the penalty on workers cannot be explained by their holding more ideologically extreme positions in primaries.

However, missing CFscores provide us an opportunity to further investigate fundraising capacity as a potential mechanism explaining the difference in performance between workers and nonworkers. If candidates do not have sufficient observations of campaign contributions to be assigned a CFscore, they likely face hurdles in competing successfully in a primary due to a want of donor support. After all, fundraising is a particularly strong predictor of primary success (Bonica, 2017). This assumption is borne out in the data. Table A7 in the SI presents the win rates for workers and nonworkers by the availability of a CFscore. Workers with a CFscore won their races 47% of the time, whereas workers without CFscores won 8% of the time. The CFscore gap was comparable among nonworkers; 63% of nonworkers with CFscores won their contests in contrast with 18% of those without.

Using casewise deletion to remove candidates with few campaign contributions provides a useful auxiliary test of the first hypothesis. If worker underperformance could be explained by lackluster fundraising, we might reasonably expect to see that workers

and nonworkers with sufficient number of unique contributors to be assigned a CFscore perform equally well in their primaries. The second model of Table A6 in the SI tests this expectation. Once candidates with insufficient funds to receive a CFscore are dropped from the data, we no longer see a significant difference in vote share between workers and nonworkers. To be clear, the coefficient estimate is negatively signed and equates to a six percentage point vote share deficit of workers compared to nonworkers. However, the estimate is no longer statistically significant at the .05 level of confidence.

This finding has plenty of limitations, and we think it constitutes suggestive but impeachable evidence of the role of fundraising. The 25-donor threshold for a candidate to receive a CFscore is at some level arbitrary. We cannot infer that 25 is the minimum number of donors a worker candidate needs to compete effectively with a white-collar primary opponent. Moreover, the limit is based on the number of contributors, not the amount of money. While a greater number of contributors might suggest more widespread support for a candidate among the donor class, it might simply be an imperfect proxy for the amount of money a candidate raises. We controlled for the dollar amount raised by primary candidates in Tables 2 and 3, but the significant association between funds raised and vote share or victory in those models was not sufficient in itself to explain away the penalty experienced by workers. Finally, it could be the case that the lack of statistical significance can be explained the small number of workers remaining in the data, rather than an even performance among workers and nonworkers above the fundraising threshold. Nonetheless, the finding raises the possibility that there exists some unknown threshold of campaign fundraising that, once surpassed, gives greater viability to working class candidates.

Candidate Quality

Prior office remains a traditional starting point for most members of Congress, regardless of class. If workers suffer vote penalties in primaries due to a lack of elite or donor support,

then workers who are able to build that support before or during a primary campaign may be able to compete more ably with white-collar opponents. Workers who held prior office at the state and/or local level before running for Congress are likely better positioned to accomplish that than amateur working class candidates. Whether through greater perceived competence, strategic entry into winnable races, or better campaigning skills, prior officeholders tend to outperform first-time candidates in Congressional elections (e.g. Jacobson, 1989; Maestas and Rugeley, 2008; Buttice and Stone, 2012). Workers who held lower-level office could use their experience, skills, and relationships with other local political leaders accumulated during their public service to build the necessary support to win a primary campaign.

We sought to test whether prior experience in office moderates the relationship between occupational background and primary performance. However, we found that very few workers held prior office—only seven of the 78 we identified. Workers were disproportionately likely to be inexperienced before running compared to nonworkers; 9.0% of workers in our data had prior experience compared to 40.3% of nonworkers. Though explaining why so few workers hold prior officeholding experience before running for Congress falls outside the scope of this study, it is possible that some of the same barriers to winning Congressional primaries exist in races for state and local office. It is also possible that, after leaving state or local office, workers use their public service as a springboard to pursue job opportunities in white-collar fields like lobbying or civil service. Such candidates would appear as former workers, rather than current workers, in our Congressional primary data.

We proceed to investigate the moderating relationship of prior experience, but caution readers to take the results with a grain of salt given the extremely small N-size of experienced workers. We begin comparing the mean vote share of experienced (quality) and inexperienced (non-quality) candidates by occupational background in Table 5. Among quality candidates, workers garnered three points less than nonworkers on average. This

Table 5: Mean Vote Share by Candidate Quality

Group	**N**	**Mean Vote Share**
Quality Workers	7	0.67
Quality Non-Workers	3,140	0.70
Non-quality Workers	71	0.22
Non-quality Non-Workers	4,651	0.35

Notes: Data from Porter and Treul (2019) and the authors. Difference for quality candidates is not significant; difference for non-quality candidates is significant.

difference is not statistically significant. Among non-quality candidates, workers received thirteen points less than nonworkers on average, a difference that is significant. Therefore in terms of raw vote shares, prior experience does seem to allow working class candidates to compete more evenly with their white-collar opponents.

For further evidence, we replicated the models in Tables 2 and 3 but added an interaction term between worker status and a binary indicator of candidate quality.[7] If prior experience had a leveling effect such that quality workers and nonworkers perform equally well, we would expect to see positive and statistically significant coefficient estimates on the interaction terms across models. In contrast with the evidence in Table 5, the multiple regression results in Table A8 in the SI show no significant moderating effect of candidate quality. Instead we see inconsistently signed estimates that are not statistically different from zero.

We cannot draw firm conclusions one way or another given this evidence. While the raw vote means suggest a moderating relationship, the fully specified regression models do not. It is unclear whether the null interactive relationship in the regression model is a product of a null relationship in reality or simply a very small number of observations of quality workers. Therefore, the evidence does not allow us to rule out either the possibility that workers with prior experience perform on par with nonworkers on average or the possibility that experience makes no difference to workers' performance.

[7]In these models, *Quality* is a binary indicator of prior experience that assigns both incumbents and non-incumbents a value of one. In order to estimate the model, we maintain the *Incumbent* indicator as a separate control but drop the *Quality Non-Incumbent* indicator.

Primary Type

Congressional primaries operate according to different rules and procedures across states. Varying rules could create different incentives for candidates, party leaders, and donors that have implications for the performance of working class candidates. In particular, we are interested in the distinction between partisan and top-two primaries. In top-two primaries, candidates of all parties compete in one contest. The two candidates with the highest vote shares proceed to compete in the general election regardless of party.

We might expect workers to perform more poorly in top-two primaries than standard partisan primaries. While much of the public and scholarly attention on top-two primaries has focused on whether more moderate candidates emerge under the system (e.g. Sparks, 2019), scholars have also accumulated some evidence that top-two primaries tend to reduce the number of candidates competing in a race (Beck and Henrickson, 2013). A speculated reason for this reduction is that the merging of partisan primaries into one contest creates added incentives for local party leaders to rally behind a single preferred candidate. Consolidating support within a party increases the odds that at least one of its candidates will proceed to the general election; multiple candidates might act as "spoilers" that allow the opposing party's candidates to claim both slots in the general election. If party leaders had added incentives to rally behind preferred candidates in the top-two primary, working class candidates might be boxed out of important campaign resources from leaders, donors, and activists.

We test whether primary type moderates the association between candidate background and electoral performance. If workers performed worse in top-two primaries, we would expect to see a negative and significant coefficient estimate of the interaction term between *Worker* and *Top-Two Primary*. In Table A9 in the SI, we present the results. As with the previous test of candidate quality, we urge readers to interpret the results cautiously given that only 15 of the 78 workers in our data competed in top-two primaries in California and Washington State. We find no differences in workers' performance

between top-two and standard partisan primaries. If anything, the positive coefficient estimate for the interaction term indicates that workers perform somewhat better in top-two primaries, all else equal. However, the lack of statistical significance for the estimate means we cannot reject the null hypothesis that there is no difference across primary types.

Conclusion

Our analyses provide evidence that primary elections serve as an additional barrier to working class candidates holding elected office. We find that workers receive a significantly smaller average vote share than nonworker candidates and mixed evidence that they are less likely to win primaries. The penalties appear roughly equivalent in both Democratic and Republican primaries.

We take these results as specific to primary elections in the U.S., and do not claim that they generalize to other types of elections. In fact, prior analyses of general election results show no or small differences in performance between workers and other kinds of candidates (Carnes, 2018; Matthews and Kerevel, 2021; Albaugh, 2020). The elements of a successful primary campaign in the U.S.—such as elite support and cash—differ sufficiently from the elements of a successful general election bid to make it difficult to conclude that these findings are in conflict. However, knowing that workers suffer reduced vote share in primary elections is important in its own right, given that primaries determine who may compete in general elections.

A number of limitations of this study are worth noting. While we make efforts to control for a number of important confounding factors, our analysis is not causally identified, leaving open the possibility that unidentified factors explain differences in vote totals between primary candidates. Furthermore, we do not pinpoint exactly *why* working class candidates receive fewer votes. We posit a lack of elite support, fundraising disadvantages, and voter bias as potential mechanisms, but do not provide conclusive evidence

in support of any of them. We highlight the fact that modeling outcomes as a function of a simple dichotomous distinction between workers and nonworkers consistently yields results showing a large gap in vote share and a significantly lower likelihood of victory for workers. Controlling for confounding factors attenuates the vote share gap between workers and nonworkers by about 15 percentage points. It is noteworthy in itself that the controls attenuate the relationship. If workers are less likely to have held prior office, are less likely to compete as incumbents, raise less money, or draw more challengers, then they disproportionately lack access to the electoral conditions or resources that help candidates win office.

We emphasize that these results do not necessarily constitute evidence of voter prejudice against worker candidates. They could be a further reflection of the deficit of elite support and campaign funds that workers face compared to their electoral rivals, factors that help shape voter support for primary candidates. We do provide suggestive evidence that surpassing a threshold of campaign funding might help to lessen the penalties that workers face relative to white-collar candidates. We cannot rule out that primary voters would be equally likely to support a well-financed worker over a well-financed lawyer or educator.

Our analysis of whether prior officeholding experience can help workers perform on par with experienced white-collar candidates proved inconclusive. Because we identify so few working class candidates with prior officeholding experience, we cannot draw firm conclusions about how working class candidates who held prior state or local office perform in House primaries. It could be the case that prior experience persuades local elites and donors to offer their support or insulates workers from voter skepticism. Alternatively, it could be the case that workers are penalized for their class background despite prior officeholding. Nonworker candidates (especially celebrities, see Canon 1990) likely have a clearer path to Congress by skipping state or local office than working class candidates do. However, most members of Congress regardless of occupation enter with prior officeholding

experience.

The findings raise the possibility that workers experience challenges winning first in lower level office and moving into higher offices if primary voters are more likely to support white-collar candidates. We focus on House primaries—typically farther up the ladder from where most candidates start their political careers—but we suspect our results more closely approximate the dynamics of the very first elections in a candidate's political careers (like nonpartisan local office or state legislative primaries) than results from studies of general election outcomes. Future research should examine how workers fare in these state and local elections.

Working class Americans remain underrepresented all levels of office, leading reformers to consider interventions that could help make our elected leaders more representative of the public. Though fundraising disadvantages stand out as a likely contributing factor to working class underrepresentation, public financing of campaigns appears unlikely to solve the problem. Multiple studies show that public financing does not help workers compete on an even playing field, and may even deter workers from running (Carnes, 2018; Kilborn, 2018). Particularly when it comes to primary elections, convincing local party leaders to support working class candidates appears to be an important goal for reformers. If donors do not fund their campaigns and local activists and officials do not recruit them to run, workers will have little chance of breaking through the barriers to holding public office.

References

Abramowitz, Alan. 1991. "Incumbency, Campaign Spending, and the Decline of Competition in United-States House Elections." *Journal of Politics* 53: 34–56.

Albaugh, Quinn. 2020. "Do Voters Discriminate Against Working-Class Candidates? Evidence from Fifty Years of Self-Reported Candidate Occupations.". https://www.qalbaugh.com/research.

Aldrich, John H. 2011. *Why Parties? A Second Look*. Chicago: University of Chicago Press.

Baer, Kenneth S. 2000. *Reinventing Democrats: The Politics of Liberalism from Reagan to Clinton*. Lawrence, KS: University of Kansas Press.

Barnes, Tiffany D., and Gregory W. Saxton. 2019. "Working-Class Legislators and Perceptions of Representation in Latin America." *Political Research Quarterly* 72 (4): 910–928.

Bawn, Kathleen, Martin Cohen, David Karol, Seth Masket, Hans Noel, and John Zaller. 2012. "A Theory of Political Parties: Groups, Policy Demands and Nominations in American Politics." *Perspectives on Politics* 10 (3): 571–97.

Beck, John H., and Kevin E. Henrickson. 2013. "The Effect of the Top Two Primary on the Number of Primary Candidates." *Social Science Quarterly* 94 (3): 777–794.

Besley, Timothy. 2004. "Paying Politicians: Theory and Evidence." *Journal of the European Economic Association* 2 (2-3): 85–114.

Besley, Timothy, Jose G. Montalvo, and Marta Reynal-Querol. 2011. "Do Educated Leaders Matter?" *The Economic Journal* 121 (554): F205–27.

Besley, Timothy, and Stephen Coate. 1997. "An Economic Model of Representative Democracy." *Quarterly Journal of Economics* 112 (1): 85–114.

Bonica, Adam. 2014. "Mapping the Ideological Marketplace." *American Journal of Political Science* 58 (2): 367–86.

Bonica, Adam. 2017. "Professional Networks, Early Fundraising, and Electoral Success." *Election Law Journal: Rules, Politics, and Policy* 16 (1): 153–171.

Bonica, Adam. 2020. "Why Are There So Many Lawyers in Congress?" *Legislative Studies Quarterly* 45 (2): 253–289.

Box-Steffensmeier, Janet M. 1996. "A Dynamic Analysis of the Role of War Chests in Campaign Strategy." *American Journal of Political Science* 40: 352–371.

Bucci, Laura C, and Kevin Reuning. 2020. "The State of Labor in the Democratic Party Coalition." *Party Politics*. Forthcoming.

Buttice, Matthew K., and Walter J. Stone. 2012. "Candidates Matter: Policy and Quality Differences in Congressional Elections." *Journal of Politics* 74 (3): 870–87.

Campbell, Rosie, and Philip Cowley. 2014. "Rich Man, Poor Man, Politician Man: Wealth Effects in a Candidate Biography Survey Experiment." *British Journal of Politics and International Relations* 16: 56–74.

Canon, David T. 1990. *Actors, Athletes, and Astronauts: Political Amateurs in the United States Congress*. Chicago: University of Chicago Press.

Carnes, Nicholas. 2013. *White-Collar Government: The Hidden Role of Class in Economic Policy Making*. Chicago: University of Chicago Press.

Carnes, Nicholas. 2018. *The Cash Ceiling: Why Only the Rich Run for Office and What We Can Do About It*. Princeton, NJ: Princeton University Press.

Carnes, Nicholas, and Eric R. Hansen. 2016. "Does Paying Politicians More Promote Economic Diversity in Legislatures?" *American Political Science Review* 110 (4): 699–716.

Carnes, Nicholas, and Meredith L. Sadin. 2015. "The Mill Workers Son Heuristic: How Voters Perceive Politicians from Working-Class Families-and How They Really Behave in Office." *Journal of Politics* 77 (1): 285–298.

Carnes, Nicholas, and Noam Lupu. 2016a. "Do Voters Dislike Working-Class Candidates? Voter Biases and the Descriptive Underrepresentation of the Working Class." *American Political Science Review* 110 (4): 832–44.

Carnes, Nicholas, and Noam Lupu. 2016b. "What Good Is a College Degree? Education and Leader Quality Reconsidered." *Journal of Politics* 78 (1): 35–49.

Carnes, Nicholas, and Noam Lupu. 2021. "The White Working Class and the 2016 Election." *Perspectives on Politics* 19 (1): 55–72.

Carson, Jamie L., Erik J. Engstrom, and Jason M. Roberts. 2007. "Candidate Quality, the Personal Vote, and the Incumbency Advantage in Congress." *American Political Science Review* 101 (2): 289–301.

Chauchard, Simon, Marko Klanja, and S.P. Harish. 2019. "Getting Rich Too Fast? Voters Reactions to Politicians Wealth Accumulation." *Journal of Politics* 81 (4): 1197–1209.

Cohen, Martin, David Karol, Hans Noel, and John Zaller. 2008. *The Party Decides: Presidential Nominations Before and After Reform*. Chicago: University of Chicago Press.

Cox, Gary W., and Jonathan N. Katz. 1996. "Why Did the Incumbency Advantage in U.S. House Elections Grow?" *American Journal of Political Science* 40 (2): 478–497.

Dal Bó, Ernesto, Frederico Finan, Olle Folke, Torsten Persson, and Johanna Rickne. 2017. "Who Becomes a Politician?" *Quarterly Journal of Economics* 132 (4): 1877–1914.

Desmarais, Bruce A., Raymond J. La Raja, and Michael S. Kowal. 2015. "The Fates of Challengers in U.S. House Elections: The Role of Extended Party Networks in Supporting Candidates and Shaping Electoral Outcomes." *American Journal of Political Science* 59 (1): 194–211.

Dominguez, Casey B. K. 2011. "Does the Party Matter? Endorsements in Congressional Primaries." *Political Research Quarterly* 64 (3): 534–544.

Griffin, John D., Brian Newman, and Patrick Buhr. 2020. "Class War in the Voting Booth: Bias Against High-Income Congressional Candidates." *Legislative Studies Quarterly* 45 (1): 131–145.

Hall, Andrew B. 2015. "What Happens When Extremists Win Primaries?" *American Political Science Review* 109 (1): 18–42.

Hanmer, Michael J., and Kerem Ozan Kalkan. 2013. "Behind the Curve: Clarifying the Best Approach to Calculating Predicted Probabilities and Marginal Effects from Limited Dependent Variable Models." *American Journal of Political Science* 57 (1): 263–277.

Hansen, Eric R., and Christopher J. Clark. 2020. "Diversity in Party Leadership in State Legislatures." *State Politics & Policy Quarterly* 20 (1): 81–107.

Hassell, Hans J. G. 2016. "Party Control of Party Primaries: Party Influence in Nominations for the US Senate." *Journal of Politics* 78 (1): 75–87.

Hoyt, Crystal L., and Brenten H. DeShields. 2021. "How Social-Class Background Influences Perceptions of Political Leaders." *Political Psychology* 42 (2): 239–263.

ICPSR, and Carroll McKibbin. 1997. "Roster of United States Congressional Officeholders and Biographical Characteristics of Members of the United States Congress, 1978-1996: Merged Data." 10th ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor]. Available at https://doi.org/10.3886/ICPSR07803.v10.

Jacobson, Gary C. 1989. "Strategic Politicians and the Dynamics of U.S. House Elections: 1946-1986." *American Political Science Review* 83: 773–793.

Jacobson, Gary C. 2012. *The Politics of Congressional Elections*. 8 ed. New York: Little Brown.

Jacobson, Gary C., and Samuel Kernell. 1983. *Strategy and Choice in Congressional Elections*. , 2nd ed. New Haven: Yale University Press.

Jewitt, Caitlin E., and Sarah A. Treul. 2014. "Competitive Primaries and Party Division in Congressional Elections." *Electoral Studies* 35: 140–49.

Kevins, Anthony. 2019. "Race, Class, or Both? Responses to Candidate Characteristics in Canada, the UK, and the US." *Politics, Groups, and Identities*. Forthcoming.

Kilborn, Mitchell. 2018. "Public Campaign Financing, Candidate Socioeconomic Diversity, and Representational Inequality at the U.S. State Level: Evidence from Connecticut." *State Politics & Policy Quarterly* 18 (3): 296–323.

Kirkland, Patricia A. 2021. "Electing CEOs.". Presented at the annual meeting of the Midwest Political Science Association, Chicago, IL.

Kirkland, Patricia A., and Alexander Coppock. 2018. "Candidate Choice Without Party Labels." *Political Behavior* 40 (3): 571–91.

Koger, Gregory, Seth Masket, and Hans Noel. 2010. "Cooperative Party Factions in American Politics." *American Politics Research* 38 (1): 33–53.

Lupia, Arthur, and Mathew D. McCubbins. 1998. *The Democratic Dilemma: Can Citizens Learn What they Need to Know?* New York: Cambridge University Press.

Maestas, Cherie, and Cynthia Rugeley. 2008. "Assessing the Experience Bonus Through Examining Strategic Entry, Candidate Quality, and Campaign Receipts in U.S. House Elections." *American Journal of Political Science* 52 (3): 520–35.

Maisel, L. Sandy, Linda L. Fowler, Ruth S. Jones, and Walter J. Stone. 1994. "Nomination Politics: The Roles of Institutional, Contextual, and Personal Variables." In *The Parties Respond. Changes in American Parties and Campaigns*, ed. L. Sandy Maisel. Boulder, CO: Westview Press.

Masket, Seth E. 2009. *No Middle Ground: How Informal Party Organizations Control Nominations and Polarize Legislatures*. Ann Arbor, MI: University of Michigan Press.

Matthews, Austin S., and Yann P. Kerevel. 2021. "The Nomination and Electoral Competitiveness of Working Class Candidates in Germany." *German Politics*. Forthcoming.

Norrander, Barbara. 2015. *The Imperfect Primary : Oddities, Biases, and Strengths of U.S. Presidential Nomination Politics*. New York: Routledge.

Ogorzalek, Thomas, Spencer Piston, and Luisa Godinez Puig. 2020. "Nationally Poor, Locally Rich: Income and Local Context in the 2016 Presidential Election." *Electoral Studies* 67: 102068.

Popkin, Samuel L. 1991. *The Reasoning Voter: Communication and Persuasion in Presidential Campaigns*. Chicago: University of Chicago Press.

Porter, Rachel A., and Sarah A. Treul. 2019. "Inexperience and Success in Congressional Primaries.". Presented at the annual meeting of the Midwest Political Science Association, Chicago, IL.

Ranney, Austin. 1972. "Turnout and Representation in Presidential Primary Elections." *American Political Science Review* 66: 21–37.

Royko, Mike. 1971. *Boss: Richard J. Daley of Chicago*. New York: E.P. Dutton and Co.

Sadin, Meredith. 2016. "Campaigning with Class: The Effect of Candidate Wealth on Voters' Evaluations.".

Schaffner, Brian, Matthew Streb, and Gerald Wright. 2001. "Teams Without Uniforms: The Nonpartisan Ballot in State and Local Elections." *Political Research Quarterly* 51 (1): 7–30.

Sides, John, Chris Tausanovitch, Lynn Vavreck, and Christopher Warshaw. 2020. "On the Representativeness of Primary Electorates." *British Journal of Political Science* 50 (2): 677–685.

Sparks, Steven. 2019. "Polarization and the Top-Two Primary: Moderating Candidate Rhetoric in One-Party Contests." *Political Communication* 36 (4): 565–585.

Utych, Stephen M., and Cindy D. Kam. 2014. "Viability, Information Seeking, and Vote Choice." *Journal of Politics* 76 (1): 152–166.

Vivyan, Nick, Markus Wagner, Konstantin Glinitzer, and Jakob-Moritz Eberl. 2020. "Do Humble Beginnings Help? How Politician Class Roots Shape Voter Evaluations." *Electoral Studies* 63: 102093.

Supporting Information for "Primary Barriers to Working Class Representation in Congress"

Contents

List of Tables

Table A1: List of Job Titles Held by Worker Candidates

- Administrative assistant
- Automotive worker
- Bartender
- Black jack dealer
- Bridge inspector
- Cargo clerk
- Carpet installer
- Cashier
- Census worker
- Construction worker
- Corrections officer
- Cosmetologist
- Court clerk
- Custodian
- Drug store photo specialist
- Electrician
- Factory worker
- Handyman
- Heavy equipment operator
- Horse shoer
- Ironworker
- Mail carrier
- Mechanic
- Metal worker
- Nurse's assistant
- Office administrator
- Pilot
- Pizza delivery man
- Police dispatcher
- Police officer
- Retail employee
- Security guard
- Technician
- Trash collector
- Truck driver
- Union officer
- Union political director
- US Army Staff Sergeant

Notes: The above titles illustrate the range of the most recent jobs for worker candidates in our data set. We do not repeat titles for multiple candidates who held the same job.

Table A2: Occupational Background and Normalized Vote Share in House Primary Elections

	(1)	(2)	(3)
Worker	-0.46*	-0.21*	-0.20*
	(0.08)	(0.08)	(0.08)
Quality Opponents		-0.06*	-0.07*
		(0.01)	(0.01)
Open Seat		0.11*	0.10*
		(0.02)	(0.02)
Quality Non-Incumbent		0.41*	0.41*
		(0.02)	(0.03)
Incumbent		0.68*	0.66*
		(0.02)	(0.02)
Primary Funds		0.36*	0.35*
		(0.02)	(0.02)
Republican		0.03*	0.04*
		(0.02)	(0.02)
Third Party		-0.47*	-0.51*
		(0.06)	(0.07)
District Median Income			-0.02
			(0.09)
District College-Educated			0.02
			(0.24)
Democratic Vote Share			0.00
			(0.05)
Year FE	Yes	Yes	Yes
Constant	1.00*	0.69*	0.71*
	(0.02)	(0.02)	(0.05)
N	7869	7571	7028
Adjusted R^2	0.00	0.20	0.19

Notes: Data from Porter and Treul (2019) and the authors. Estimates obtained using OLS regression. *p<0.05. Significance tests are two-tailed.

Table A3: Mean Vote Share for Current and Former Workers

Group	**N**	**Mean Vote Share**
Current Workers	78	0.26
Former Workers	489	0.59

Notes: Data from Porter and Treul (2019) and the authors.

Table A4: Do Current and Former Workers Perform Differently in Primaries?

	(1)	(2)	(3)	(4)	(5)	(6)
	DV: Vote Share			*DV: Win*		
Worker	-0.20*	-0.08*	-0.08*	-1.34*	-0.55	-0.52
	(0.02)	(0.02)	(0.02)	(0.29)	(0.29)	(0.30)
Former Worker	0.07*	-0.02*	-0.02*	0.60*	-0.01	-0.03
	(0.01)	(0.01)	(0.01)	(0.10)	(0.14)	(0.15)
Number of Candidates		-0.10*	-0.10*		-0.40*	-0.43*
		(0.00)	(0.01)		(0.03)	(0.03)
Quality Opponents		-0.08*	-0.07*		-0.70*	-0.68*
		(0.01)	(0.01)		(0.06)	(0.06)
Open Seat		0.10*	0.09*		0.23*	0.17*
		(0.01)	(0.01)		(0.07)	(0.07)
Quality Non-Incumbent		0.13*	0.13*		1.40*	1.37*
		(0.01)	(0.01)		(0.13)	(0.13)
Incumbent		0.42*	0.41*		5.04*	4.87*
		(0.01)	(0.01)		(0.21)	(0.21)
Primary Funds		0.11*	0.11*		1.38*	1.41*
		(0.02)	(0.02)		(0.24)	(0.26)
Republican		-0.01*	-0.01*		-0.14*	-0.14*
		(0.01)	(0.01)		(0.05)	(0.05)
Third Party		-0.10*	-0.10*		-0.79*	-2.76*
		(0.01)	(0.01)		(0.35)	(0.99)
District Median Income			-0.07			0.58*
			(0.04)			(0.27)
District College-Educated			0.17			-0.54
			(0.10)			(0.72)
Democratic Vote Share			-0.03			0.37*
			(0.02)			(0.17)
Contest RE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.65*	0.75*	0.79*	0.18*	0.89*	0.60*
N	7869	7571	7028	7869	7571	7028
BIC	4696.96	-2712.00	-2284.93	10,812.56	6072.30	5776.46

Notes: Data from Porter and Treul (2019) and the authors. Models 1-3 estimated with multilevel linear regression; models 4-6 estimated with multilevel logistic regression. Robust standard errors clustered by contest in parentheses. *p<0.05. Significance tests are two-tailed.

Table A5: Do Democratic and Republican Workers Receive Different Penalties?

	(1)	(2)	(3)	(4)	(5)	(6)
	DV: Vote Share			*DV: Win*		
Worker	-0.22*	-0.08*	-0.08*	-1.58*	-0.81*	-0.79*
	(0.04)	(0.03)	(0.03)	(0.41)	(0.37)	(0.38)
Republican	-0.08*	-0.01*	-0.01*	-0.45*	-0.15*	-0.15*
	(0.01)	(0.01)	(0.01)	(0.05)	(0.05)	(0.05)
Worker × Republican	-0.00	-0.00	-0.00	0.47	0.63	0.64
	(0.05)	(0.04)	(0.04)	(0.57)	(0.59)	(0.60)
Number of Candidates		-0.10*	-0.10*		-0.40*	-0.43*
		(0.00)	(0.01)		(0.03)	(0.03)
Quality Opponents		-0.07*	-0.07*		-0.70*	-0.69*
		(0.01)	(0.01)		(0.06)	(0.06)
Open Seat		0.09*	0.08*		0.23*	0.17*
		(0.01)	(0.01)		(0.07)	(0.07)
Quality Non-Incumbent		0.13*	0.13*		1.40*	1.37*
		(0.01)	(0.01)		(0.13)	(0.13)
Incumbent		0.41*	0.41*		5.04*	4.86*
		(0.01)	(0.01)		(0.21)	(0.21)
Primary Funds		0.11*	0.11*		1.37*	1.41*
		(0.02)	(0.02)		(0.24)	(0.26)
District Median Income			-0.07			0.58*
			(0.04)			(0.27)
District College-Educated			0.17			-0.56
			(0.10)			(0.72)
Democratic Vote Share			-0.03			0.37*
			(0.02)			(0.17)
Contest RE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.70*	0.75*	0.79*	0.49*	0.89*	0.61*
N	7697	7432	6923	7697	7432	6923
BIC	4582.54	-2515.28	-2137.62	10,527.82	6010.98	5758.14

Notes: Data from Porter and Treul (2019) and the authors. Models 1-3 estimated with multilevel linear regression; models 4-6 estimated with multilevel logistic regression. Robust standard errors clustered by contest in parentheses. *p<0.05. Significance tests are two-tailed.

Table A6: Ideological Extremity, Fundraising Ability, and Primary Vote Share

	(1)	(2)
Worker	-0.08*	-0.07
	(0.02)	(0.04)
Number of Candidates	-0.10*	-0.09*
	(0.01)	(0.01)
Quality Opponents	-0.07*	-0.07*
	(0.01)	(0.01)
Open Seat	0.08*	0.05*
	(0.01)	(0.01)
Quality Non-Incumbent	0.13*	0.11*
	(0.01)	(0.01)
Incumbent	0.40*	0.33*
	(0.01)	(0.01)
Primary Funds	0.11*	0.08*
	(0.02)	(0.01)
Republican	-0.01*	-0.03*
	(0.01)	(0.01)
Third Party	-0.09*	-0.13*
	(0.01)	(0.02)
District Median Income	-0.07	-0.05
	(0.04)	(0.04)
District College-Educated	0.19	0.20*
	(0.10)	(0.10)
Democratic Vote Share	-0.04	-0.08*
	(0.02)	(0.02)
Ideological Extremity	-0.01*	-0.02*
	(0.00)	(0.01)
Contest RE	Yes	Yes
Constant	0.81*	0.86*
	(0.02)	(0.02)
N	7028	5486
BIC	–	-2289.13

Notes: Data from Porter and Treul (2019), Bonica (2014) and the authors. Model 1 uses multiple imputation to deal with missing DIME score estimates; model 2 uses casewise deletion. Robust standard errors clustered by contest in parentheses. *p<0.05. Significance tests are two-tailed.

Table A7: Win Rates for Workers and Nonworkers by Availability of CFscores

Group	**Percent Winning**
With CFscores	
Workers	48%
Nonworkers	63%
No CFscores	
Workers	8%
Nonworkers	17%

Notes: Data from Porter and Treul (2019), Bonica (2014) and the authors.

Table A8: Does Prior Experience Put Workers on an Even Playing Field with Nonworkers?

	(1)	(2)	(3)	(4)	(5)	(6)
	DV: Vote Share			*DV: Win*		
Worker	-0.10*	-0.08*	-0.08*	-0.81*	-0.52	-0.49
	(0.02)	(0.02)	(0.02)	(0.33)	(0.32)	(0.32)
Quality Candidate	0.33*	0.13*	0.13*	2.25*	1.42*	1.41*
	(0.01)	(0.01)	(0.01)	(0.06)	(0.13)	(0.13)
Worker × Quality Candidate	-0.16	0.04	0.03	-0.59	-0.12	-0.20
	(0.14)	(0.11)	(0.11)	(0.92)	(0.72)	(0.72)
Number of Candidates		-0.10*	-0.10*		-0.41*	-0.45*
		(0.00)	(0.01)		(0.03)	(0.03)
Quality Opponents		-0.08*	-0.08*		-0.71*	-0.70*
		(0.01)	(0.01)		(0.06)	(0.06)
Incumbent		0.29*	0.28*		3.65*	3.50*
		(0.01)	(0.01)		(0.22)	(0.23)
Open Seat		0.10*	0.09*		0.25*	0.20*
		(0.01)	(0.01)		(0.07)	(0.07)
Primary Funds		0.11*	0.11*		1.40*	1.43*
		(0.02)	(0.02)		(0.24)	(0.26)
District Median Income			-0.07			0.52*
			(0.04)			(0.26)
District College-Educated			0.17			-0.50
			(0.10)			(0.71)
Democratic Vote Share			-0.03			0.24
			(0.02)			(0.15)
Contest RE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.51*	0.75*	0.79*	-0.59*	0.83*	0.63*
	(0.01)	(0.01)	(0.02)	(0.04)	(0.07)	(0.14)
N	7869	7571	7028	7869	7571	7028
BIC	1971.62	-2683.10	-2265.66	9176.44	6063.81	5781.46

Notes: Data from Porter and Treul (2019) and the authors. Models 1-3 estimated with multilevel linear regression; models 4-6 estimated with multilevel logistic regression. Robust standard errors clustered by contest in parentheses. *p<0.05. Significance tests are two-tailed.

Table A9: Does Primary Type Moderate Workers' Performance?

	(1)	(2)	(3)	(4)	(5)	(6)
	DV: Vote Share			*DV: Win*		
Worker	-0.21*	-0.09*	-0.09*	-1.36*	-0.63*	-0.64*
	(0.03)	(0.02)	(0.02)	(0.31)	(0.30)	(0.31)
Top-Two Primary	-0.39*	-0.06*	-0.06*	-0.33*	1.98*	2.00*
	(0.01)	(0.02)	(0.02)	(0.08)	(0.12)	(0.13)
Worker ×	0.03	0.04	0.05	-0.01	0.10	0.34
Top-Two Primary	(0.03)	(0.03)	(0.03)	(0.76)	(0.72)	(0.76)
Number of Candidates		-0.09*	-0.10*		-0.49*	-0.52*
		(0.00)	(0.01)		(0.03)	(0.03)
Quality Opponents		-0.07*	-0.07*		-0.92*	-0.91*
		(0.01)	(0.01)		(0.08)	(0.08)
Open Seat		0.09*	0.08*		0.43*	0.37*
		(0.01)	(0.01)		(0.07)	(0.08)
Quality Non-Incumbent		0.13*	0.13*		1.67*	1.65*
		(0.01)	(0.01)		(0.14)	(0.15)
Incumbent		0.42*	0.41*		5.22*	5.01*
		(0.01)	(0.01)		(0.23)	(0.24)
Primary Funds		0.11*	0.11*		1.51*	1.56*
		(0.02)	(0.02)		(0.27)	(0.29)
Republican		-0.02*	-0.01*		-0.07	-0.07
		(0.01)	(0.01)		(0.05)	(0.05)
Third Party		-0.09*	-0.09*		-2.09*	-4.14*
		(0.01)	(0.01)		(0.36)	(0.98)
District Median Income			-0.04			-0.37
			(0.04)			(0.24)
District College-Educated			0.14			0.80
			(0.10)			(0.66)
Democratic Vote Share			-0.02			0.04
			(0.02)			(0.16)
Contest RE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.67*	0.75*	0.78*	0.25*	0.98*	1.12*
	(0.01)	(0.01)	(0.02)	(0.03)	(0.07)	(0.14)
N	7869	7571	7028	7869	7571	7028
BIC	4394.40	-2714.78	-2287.35	10,840.78	5832.84	5568.63

Notes: Data from Porter and Treul (2019) and the authors. Models 1-3 estimated with multilevel linear regression; models 4-6 estimated with multilevel logistic regression. Robust standard errors clustered by contest in parentheses. *p<0.05. Significance tests are two-tailed.

References

Bonica, Adam. 2014. "Mapping the Ideological Marketplace." *American Journal of Political Science* 58 (2): 367–86.

Porter, Rachel A., and Sarah A. Treul. 2019. "Inexperience and Success in Congressional Primaries.". Presented at the annual meeting of the Midwest Political Science Association, Chicago, IL.